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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,053	01/30/2004	Baodu Xu	USP2322C-DRSH	7030
30265	7590	06/29/2005	EXAMINER	
RAYMOND Y. CHAN 108 N. YNEZ AVE., SUITE 128 MONTEREY PARK, CA 91754			PERRY, ANTHONY T	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/769,053

Applicant(s)

XU ET AL.

Examiner

Anthony T. Perry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 17 recites the limitation "said igniter casing" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohacsi (US 5,898,272) in view of Boffito et al. (US 4,312,669).

Regarding claim 1, Fig. 1 of the Mohacsi reference discloses a CCFL comprising a light tube body (12) having first electrode (18) at a first end portion of the tube body (12) and a second electrode (16) at a second end portion of the tube body (12). The tube contains an inert gas, a mercury substance emitting UV light, and a layer of phosphor coated on the inner surface of the tube body for generating visible light (see for example col. 4, lines 20-24 and 34-47). Mohacsi teaches the use of a getter at the second electrode, but does not specifically state what type is used, only that zirconium based getters are commonly used (see for example col. 5, lines 63).

However, Boffito et al. teaches the use of a zirconium-vanadium-iron getter that can sorb water vapor without the release of H₂ between 200-350 degrees Celsius and can be used in a wide temperature range for the sorption of other gases (see for example col. 2, lines 15-65).

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Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the zirconium-vanadium-iron getter taught by Boffito since it is a Zirconium based getter that can be activated at low temperatures.

Regarding claims 2-3, Boffito teaches the zirconium-vanadium-iron getter being activated at 390 degrees Celsius (col. 6, lines 42-47).

The reasons for combination given in the rejection of claim 1 applies.

Regarding claim 6, the second electrode of the Mohasci reference is in the form of a tube having a cylindrical sidewall (24) defining an inner hollow portion (see Fig. 2). The recitation "in order to enhance said second electrode in terms of resisting oxidation and surviving an impact force applied to said light tube" has not been given patentable weight because is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987).

Regarding claims 4-5 and 7-8, Mohasci and Boffito do not specifically state the second electrode being in the form of a single layer plate, a two-layer plate, a spiral having a constant cross-section, or a spiral having a varying cross-section. However, lamp electrodes having such shapes are well known in the art as are there. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have provided a cathode having any known shape (hollowed cylinder, plate-shape, spiral, etc.), since the selection of known materials for a known purpose is within the skill of the art. (See prior art cited section for examples of such electrode

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shapes). Again, the recitation “in order to enhance said second electrode in terms of resisting oxidation and surviving an impact force applied to said light tube” has not been given patentable weight because is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987).

Regarding claims 9-12, Mohasci and Boffito do not specifically teach the light tube shaped a spiral with a constant area of a cross-section, a spiral with a wider top, a spiral with a wider bottom, or a planar coil. However, fluorescent lamp tubes having such shapes are well known in the art. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have provided a tube having any known shape (spiral with a constant area of a cross-section, a spiral with a wider top, a spiral with a wider bottom, a planar coil, etc.), since the selection of known materials for a known purpose is within the skill of the art. (See prior art cited section for examples of such tube shapes). The recitation “in order to reduce a space occupied by said same” has not been given patentable weight because is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987).

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Claims 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohacsi (US 5,898,272) in view of Boffito et al. (US 4,312,669) as applied to claims 1 and 9-12, above, and further in view of Nigg (US 5,015,917).

Regarding claim 13, Mohacsi and Boffito do not specifically teach a housing for the CCFL. However, the use of housings for protecting lamps from outside elements is well known in the art. Nigg teaches an adapter for fluorescent lamps that includes a housing (249) (see Fig. 6a) and a base (3) for supporting the housing (249), having a first terminal (5) and a second terminal (7) insulated from each other (see Fig. 1). The adapter allows a more efficient fluorescent lamp to be used in place of an incandescent lamp. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the adapter for the fluorescent lamp of the combined invention so that the more energy efficient fluorescent lamp can be used instead of an incandescent lamp.

Regarding claims 14-15, Boffito teaches the zirconium-vanadium-iron getter being activated at 390 degrees Celsius (col. 6, lines 42-47).

The reasons for combination given in the rejection of claim 13 applies.

Regarding claims 16-17, Nigg further teaches an igniter (18) located in an igniter casing (1) that extends from the base (3) (see Fig. 1). The igniter is electrically connected to the first and second terminals.

The reasons for combination given in the rejection of claim 13 applies.

Regarding claims 18-19, Nigg teaches that an O-ring may be used to create an airtight seal between the housing and the igniter casing so that the adapter can be used in a moist environment (see for example col. 5, lines 31-38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to not use the optional O-ring when it is known

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that the lamp will not be used in a moist environment to cut on costs. The recitations “for maintaining heat therein in order to warm the second electrode” and “for balancing the pressure within and without said housing” have not been given patentable weight because is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987).

Regarding claim 20, the prior art of Mohasci, Boffito, and Nigg do not specifically teach the housing being made of a specific color. However, it has been held that matters relating to ornamentation only which have no mechanical function cannot be relied upon to patentably distinguish the claimed invention from the prior art. See for example, *In re Seid*, 161 F.2d 229, 73 USPQ 431 (CCPA 1947).

Regarding claim 21, the housing of the lamp taught by Nigg is made of glass.

The reasons for combination given in the rejection of claim 13 applies.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ge et al. (US 6,452,326); Yu (US 6,739,737); Maya et al. (US 6,064,155); Li (US 2003/0223230); and Huang et al. (US 6,828,719) disclose many known different shapes of fluorescent tubes.

Nakamura et al. (US 6,000,982); Hofmann (US 4,694,215); Aizawa et al. (US 5,572,088); and Yan (US 6,630,780) disclose many known different shapes of fluorescent tubes.

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Contact Information

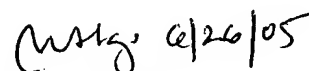
Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is (571) 272-2459. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-24597. **The fax phone number for this Group is (703) 872-9306.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony Perry
Patent Examiner
Art Unit 2879
June 26, 2005



Mariceli Santiago
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